Amendments to the Specification:

Please replace the paragraph beginning at page 9, line 5 with the following amended paragraph:

Each entry included in SRSB 42 includes a pointer valid bit (V-bit) 42a, a color bit 42b, a return address field 42c, and a back pointer field 42d. Back pointer field 42d is used to hold the previous STOS 46 value, and is used to decrement ("back up") the STOS 46 pointer field when a return address is being popped from SRSB 42. V-bit 42a is written with the current value of STOS_V 50 whenever a return address is being pushed onto SRSB 42. V-bit 42a is used to indicate whether a back-pointer stored in 42d is valid, as will be explained. Color bit 42b is written with the current value of SCOLOR [[52]] 47 whenever a return address is pushed onto SRSB 42. When an entry is popped (read) from SRSB 42, color bit 42b is used to determine if the return address included in that entry has been over-written, as will be explained. Return address field 42c is used to store a predicted return address that has been pushed onto buffer 40.

Please replace the paragraph beginning at page 11, line 15 with the following amended paragraph:

A process 80 for storing and retrieving return addresses using buffer 40 is shown in FIGS. 2B-2D. Process 80 includes several separate sub-processes, 80a-80[[f]]e, for performing

different store or retrieve operations on buffer 40, as shown in FIG. 2A.

Please replace the paragraph beginning at page 13, line 3 with the following amended paragraph:

Sub-process 80c depicts the actions performed when a branch instruction is fetched by front end 16. Sub-process 80c includes pushing (121) ~~(120)~~ the current values of STOS, STOS_V, SCOLOR and CTOS onto a TBIT 60 entry.

Please replace the paragraph beginning at page 14, line 16 with the following amended paragraph:

Sub-process 140a includes a sequence of actions, 141[[142]]-146, that are performed when a CALL instruction is fetched by front end 16. Sub-process 140a includes pushing (141) the predicted return address into return address field 42c, STOS pointer (and SRSB/CRSB indicator 56) into back pointer field 42d of the SRSB entry pointed to by SALLOC. Sub-process includes setting (142) V-bit field 42a in SRSB entry pointed to by SALLOC. Sub-process 140a includes setting (144) STOS equal to SALLOC and incrementing (146) SALLOC with modulo N counter 54.